Comment #1: *It is not clear from the Work Plan what PCB analysis method will be used for aqueous samples. We believe Method 1668 is more appropriate as it will provide a more definitive measure of PCB movement. The presence of solvents in the NAPL may enhance the solubility and degradation of PCBs, which could mean that PCBs might not be captured in an Aroclor analysis. Since the stated goals of the study include measuring the mobility potential of PCBs, it is particularly important to be sure we are capturing all PCBs that are present.*

Because of the higher cost associated Method 1668, BASF may analyze just a subset of the water samples using this Method. However, it is important to perform both Methods 8082 and Method 1668 on a subset of samples so that we can compare the results. Furthermore, all the congeners should be reported when Method 1668 is used.

Similarly, while we recommend analysis of both filtered and unfiltered samples to determine whether PCBs are contained within the water, vs. being attached to fine particulates; at a minimum, unfiltered samples must be used to capture the "worst-case" condition.

In any event, BASF will need to provide sufficient data (e.g. Method 8082 or 1668 and filtered or unfiltered samples) to support the conceptual site model relative to the migration of PCBs in GW.

Response: One goal of the proposed work scope is to characterize PCB mobility in groundwater, either as a dissolved phase or as an adsorbed phase on mobile, colloidal-sized, solids. At this stage of the investigation all groundwater sample locations will be either from new or existing wells and piezometers. All new wells and piezometers will be installed with continuous coring and soil sampling for Aroclors via Method 8082 with Soxhlet Extraction. The soil data will be used to support in situ PCB mass characterization.

To understand whether a groundwater characterization based on Aroclor analysis using filtered samples from completed wells and piezometers is sufficient to meet the transport objective, the work plan will include the following water sampling protocols:

- All groundwater sample locations will include an unfiltered water sample for Aroclors via Method 8082 with Soxhlet Extraction
- 25% of the locations will add an unfiltered split sample for congeners via Method 1668
- 25% of the locations will add a filtered sample for Aroclors via Method 8082 with Soxhlet Extraction utilizing a dedicated 5 micron in-line filter

The unfiltered data will determine the presence of PCB mass present in groundwater either adsorbed or dissolved. The filtered data will quantify the mobile PCB fraction dissolved and adsorbed on colloidal-sized particles. The congener analysis will quantify PCB mobility for that mass fraction that is not represented in Aroclor analysis.

Groundwater sampling protocols from wells and piezometers will be revised, as necessary, based on these initial data.

Comment #2: *Regarding the dye testing that will be performed, if break-out is observed on the river side of the sheet pile wall, how will the precise location (x and y coordinates) be confirmed? For example, will dye simply be observed at surface of river or will a camera be placed below the waterline to detect the exact location of break-through on the sheet pile wall?*

Response: The sheet pile wall is an important component of the hydrology at the Site, as it affects the groundwater flow paths between the upland and the river. The dye test task is intended to be a qualitative methodology to evaluate the integrity of the sheet pile wall to determine if there are areas along the reach through which groundwater discharges. Observed discharges apparent from the upland side will subsequently be characterized spatially through boring, piezometer and monitoring well installations. The dye test will be implemented in parallel with other characterization tasks, and invasive field work will be modified, as needed, to characterize dye discharge over time. BASF will provide EPA periodic updates on the results of the dye test and intended modifications to the field plan, the goal being to characterize the hydrologic influence of the sheet pile wall and position monitoring equipment to characterize groundwater discharge.

Comment #3: *The QA/QC section indicates the inclusion of trip blanks and Matrix Spikes and Matrix Spike Duplicate (MS/MSD) samples. The plan should indicate the number/frequency of each type of QC sample. It should also state each parameter (e.g. we are not sure whether MS/MSD samples will be collected for all aqueous parameters or only VOCs and PCBs).*

Response: Matrix Spikes and Matrix Spike Duplicate (MS/MSD) samples will be collected and analyzed at a frequency in general conformance with Fuss & O'Neill's Generic QAPP. The QAPP specifies MS/MSD sample analysis for specific analytical laboratories (Pace Analytical and Phoenix Environmental Laboratories). For this project, we propose to include MS/MSD analyses on PCB and VOC samples at a frequency of one MS/MSD analysis per 20 primary samples.

Comment #4: *The Field Plan references the approved Fuss & O'Neill Generic QAPP. A full reference should be provided along with the EPA RFA number (i.e. EPA QA Branch tracking number).*

Response: The full reference is as follows: Generic Quality Assurance Project Plan for Projects in Connecticut, Massachusetts, and Rhode Island, Revision 0.0, prepared by Fuss & O'Neill, October 2019. The EPA RFA number is 19120.

Comment #5: The plan does not include how groundwater/surface water parameters, beyond VOCs and PCBs, will be used in the evaluation of site conditions. Please elaborate further.

Response: The expanded general chemistry list for groundwater samples is intended to provide data to assist with the evaluation of potential remedial treatment options, if necessary. The groundwater level measurements will assist with determining the elevation of groundwater relative to the Pawtuxet River to determine groundwater flow to the river. The upstream/downstream surface water samples will be analyzed for PCB and VOC only.